THE VETERINARY RECORD

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PRINCIPAL WILLIAMS

The death of Professor William Williams will cause a painful surprise throughout the whole veterinary profession. It was sudden and unexpected, and it leaves a gap in the veterinary teaching staff of the country which cannot be filled. The vast experience, clear judgment, and logical deductive powers which made the Professor pre-eminent as a clinical observer were accompanied by a gift of lucid exposition and a force of character which made him unsurpassed as a teacher of medicine and surgery. Like his famous predecessor, Professor Dick, he had the power of impressing upon students some of his own strong attributes, and consequently he turned out a large number of graduates who have become famous practitioners. Students have lost an unapproachable teacher and practitioners will for a long time to come regret the decease of a consultant in whom the most perfect confidence was reposed.

We must postpone till next week a full reference to the place filled by Professor Williams in Veterinary science. The effect of his writings and teaching has been vast, and cannot be done justice to in a passing notice. All we can now do is to weakly voice the sincere and widespread regret that will be felt in every English speaking country, for our deceased friend's books were read everywhere, and his students are to be found all over the globe.

To his family and his colleagues his loss is irreparable, and to them we offer our respectful sympathy.

Late Delivery of "The Record."

During the last few months we have received repeated complaints of late delivery of *The Record*—usually that it has not been delivered till Monday morning; and in every case which has been traced the Post Office has been at fault, with the exception of two in which the subscribers had not included in the address the name of the post town through which their local office is served. In every case the G.P.O. have had the fault amended.

Single instances of late delivery may occur from a variety of causes and at any time, but when it occurs several times the wrapper of the paper, which bears the stamp with date and hour of posting, should be forwarded to us with the time of delivery endorsed upon it, and a formal complaint. We shall then in all probability be able to get the matter set right. Enquiry and complaint to the local Postmaster is often an assistance. In all cases in which the hour shown in the stamp is 4.45 p.m. or 5.15 p.m. and the date a Friday, it may be taken that the fault does not lie with us.

H. & W. Brown.

COMPOUND DEPRESSED FRACTURE OF THE SUPERIOR MAXILLA.

By E. Wallis Hoare, F.R.C.V.S., Cork.

This case I saw in consultation.

The subject was a harness mare. While being shod in a country forge, one of the smiths for some unaccountable reason flung a heavy pincers at the animal's head, which struck the superior maxilla of the off side, at the point usually selected for trephining the superior maxillary sinus. Profuse hæmorrhage followed, which was controlled after a lot of difficulty by the veterinary surgeon in attendance, it being necessary to firmly plug the nasal passage with wool.

On examination of the case I found a small wound which admitted a large sized probe, this was enlarged by incision and an almost circular portion of bone was found to have been completely punched out.

The sinus was full of clotted blood, all this was carefully removed, and after a diligent search the missing portion of bone was discovered in the sinus and removed by forceps, also a number of small portions.

The edges of the opening in the superior maxilla were then trimmed, and the animal being allowed to rise the sinus was thoroughly irrigated with creolin solution, and a tampon of gauze inserted. The part was treated in the usual manner afterwards, and the animal made a good recovery.

Compound Comminuted Fracture of the Ulna.

The subject was an officer's charger. He received a kick on the outside of the ulnar region from another horse, and immediately went excessively lame. I saw the animal in consultation with the Army veterinary surgeon, the case was in slings, and the position of the limb was that seen in "dropped elbow." There was a small wound on the outside of the elbow that admitted a probe, and the part was very much swollen and painful.

On careful examination crepitus could be discovered. The owner was very anxious everything possible should be done for the animal; but constitutional symptoms soon appeared and it was thought advisable to have him destroyed.

Post-mortem examination showed the ulna completely separated from the radius and fractured in an irregular manner through its body. The upper part of the body was broken into about a dozen small pieces.

CARDIAC LESIONS IN A HORSE THE SEQUEL OF INFLUENZA.

By William Scott, F.R.C.V.S.. Binford Place, Bridgwater.

Subject.—A well bred cart gelding, 4 years old, the property of the S. T. Company.

Previous History.—On September 10th of this year we attended him for an acute attack of bilious influenza with septic enteric complications, from the effects of which he made a rapid and to all appearance a good recovery and went to work on September 29th. From that date up till October 20th he was regularly employed at slow work favourable to his condition and age, when he was again placed on the sick list.

Clinical History and Symptoms.—October 20th, appetite in abeyance, and when exerted his breathing became laboured. Temperature 101 F.; respiration changeable and much accelerated on excitement or noise; pulse (probable average) 49 per minute, very weak and irregular. On auscultating the heart a distinct friction sound could be heard by the phonophone, and so distinct was it that it seemed almost to obliterate the heart sounds which were already indistinct. At this stage no cardiac murmur could be detected. The friction sound was synchronous with the heart beat. Percussion seemed to suggest no hypertrophy of the organ.

Oct. 21st.—Patient slightly better; pulse stronger and perhaps more regular, probably 45 per minute; temperature 102·1° F.; respiration not so shallow but still easily upset. An occasional cough was noted which was short and painful, almost pleuritic. Had eaten some bran and a few carrots; the bowels responding freely to an aperient. On auscultation friction sounds less audible, and systolic and diastolic sounds more distinct.

Oct. 22nd (afternoon).—Condition worse, look anxious, and breathing very hurried and laboured the result of acute pulmonary congestion; pulse more irregular and slow; temperature 101·8° F.; heart sounds muffled and oppressed, friction sounds gone, and for the first time cardiac murmurs were detected. With the left hand on the radial artery and the phonophone applied over the heart the murmur was found to be systolic in time; that is to say the murmur took place at the commencement of systole—closure of the auriculo-ventricular valve. The sound was best heard between the fifth and sixth ribs.

My diagnosis at this stage was mitral incompetance with pericarditis and probably dropsy of the pericardium.

Oct. 23rd (11 a.m.)—Condition critical; pulse running down and irregular; respiration shallow, and the body bathed in cold sweats; abdomen slightly tympanitic.

At 4.30 p.m. countenance hypocratic; fell down twice in an hour, on rising he spasmodically arched his neck and placed his muzzle in the brisket. The membrana-nictitans was at times convulsively thrust across the cornea. The heart at this stage, strange to say, for the first time was beating regularly, no doubt being sustained by nervous excitement and stimulated by what was to be nature's last effort. Death took place at 5.30 p.m.

Autopsy.—On opening the heart sac about 15 oz. of sero-sanguineous fluid escaped. The pericardial endothelium was much inflamed. The heart itself did not seem abnormally large although somewhat flabby. The left ventricular endocardium was deeply inflamed and a few small warty vegetations were studded between the chordæ tendinæ, and on the ventricular aspect of the cusps. The cavity contained a large ante-mortem clot the end of which proceeded into the auricle of the same side. The left auricle was also inflamed but in smaller and more limited patches. The myocardium showed irregular and mottled softenings throughout its substance, but principally in the left heart. The lungs were much congested, the left lung showing distinct hypostasis. The larger pulmonary blood vessels contained ante-mortem clots.

Conclusions.—It is worthy of notice that with a diffused inflammation of a vital organ (pericarditis, myo-carditis, endo-carditis) the temperature readings never exceeded 102·1° F. That the cardiac lesions were the after effects of influenza I think no one will deny. This is quite a common complication in man. But I agree with those who say these conditions may be and are produced by colds. If a pleurisy can be produced by barometric changes why not a peri or endo-carditis.

While writing I am at present treating an interesting case which, if my diagnosis is true, has developed pericarditis, then congestion of the lungs and now he is suffering from acute pleurisy—all the result of standing in a gangway with a cold north-east wind blowing for half-an-hour. My fairly accurate diagnosis I largely attribute to the phonophone as made by Arnold & Son, it is far superior to the ordinary binaural or auscultating instrument.

EXTRACTS AND NOTES

VETERINARY COMMITTEE OF R.A.S.E.

At the monthly Council meeting of the R.A.S.E. held Nov. 7th,

Mr. Ashworth announced that a report had now been received from the Tuberculin Sub-Committee which had been appointed on May 31st, 1899, to supervise the experiments then ordered to be carried out at the Royal Veterinary College in the direction of infecting healthy cattle of various ages with tuberculosis and then testing them, and an equal number of control animals, with tuberculin at various dates after infection, all the animals being subsequently killed and post-mortemed. The Report of the Sub-Committee, signed by Lord Brougham and Vaux, Sir Nigel Kingscote, Sir George Brown, and Professor M'Fadyean, would be printed in full in the next number of the Journal, but the following was a summary of the conclusions at which the Sub-Committee had arrived:—

Touching the question of the reliability of tuberculin as a test for tuberculosis in cattle, the Sub-Committee believe that the results of their own and other experiments justify the following statements:—

1. With few exceptions manifest tuberculous disease is discoverable at the post-mortem examination of animals in which there is a decided rise of temperature after the injection of tuberculin.
2. As a rule, no such lesions are to be found in those animals in which there is no decided rise of temperature after the injection of tuberculin; but the exceptions to this rule are more numerous than in the preceding case.

Practically speaking, the exceptions under each of these heads may be regarded as failures or errors in the test, but close examination of the circumstances suggests that some of the exceptions may be explained otherwise than by assuming an inconstancy of action on the part of tuberculin.

Tuberculin falls short of infallibility, inasmuch as there is in every case a period after infection during which it provokes no reaction, and some of the experiments described in the report indicate that this period may be longer than has hitherto been supposed.

Even when full account is taken of these possibilities of error the Sub-Committee are of opinion that tuberculin is an agent of great value, far surpassing all other methods of diagnosis, and that, if properly employed, it is calculated to render immense service in dealing with tuberculosis.

The Veterinary Committee had had under their consideration a suggestion made by Mr. L. H. Becher Shand at the last Anniversary General Meeting, which he had subsequently expanded in a letter, with reference to the possibility of milk becoming infected with the germs of tuberculosis during its transit by railway. Mr. Shand had asked whether "germs might not be carried into the milk churns through their ventilators, and that in many cases the germs found on arrival were not in the milk when it left the farm," and had suggested that the Society should undertake an investigation as to whether "milk which was pure when it left the farm did not get contaminated while in transit by rail." The reply which had been agreed to by the Committee, after consultation with the Society's veterinary advisers, was as follows:—

1. It is obvious that milk (even absolutely pure milk and milk which has been effectually sterilised) is quite capable of being contaminated with tubercle bacilli or other infective organisms, unless means are adopted to keep it from contact with infective matter which may be conveyed to it at any time by the atmosphere and in other ways. The Society is fully alive to the dangers to the public health which may arise from the prevalent habit of expectoration by possibly consumptive persons on railway platforms, highways, and other public places, and has co-operated with other public bodies in endeavouring to arouse public attention to this matter. The possibility must not, however, be excluded, that sufficient care is not always taken on the farms where milk is produced to secure the most scrupulous cleanliness in the vessels containing the milk and in the returned empty milk churns, as well as in all the surroundings of the milk on the farm, and of the cows themselves.

2. The Committee are advised that the holes in the cone in the centre of the lid of a milk churn are essential to allow the escape of steam, vapour, or gases of any kind which may be disengaged from the milk during transit; but in the opinion of the Society's scientific advisers, these holes are scarcely worth consideration as a means of the possible contamination of the milk through the agency of the air.

3. A more likely source of contamination is to be found in the too common practice of sending milk by railway in churns with loose lids. Milk which may be splashed out round the lids during a journey, or whilst the churns are being moved about railway platforms, may wash away the dust and other impurities which accumulate on the surface of the lid, and may carry them back into the bulk of the milk in the churn; and, in this way, it is quite possible that tubercle bacilli might gain access to the milk in the churn through the medium of the dried expectorations of consumptive persons in railway stations, streets, or other public places.

4. This danger, however, may be guarded against by sending milk by railway in locked or sealed churns, the lids of which are tight. There appears to be still considerable misapprehension amongst farmers as to the willingness of railway companies to accept for transit over their lines milk churns thus locked or sealed, although it is a regular practice by farmers serving some of the leading milk-distributing companies in the Metropolis. The railway companies have undoubtedly favoured the system of sending churns with loose lids, on the ground that examination of the contents by the railway officials was thus facilitated; but the Dairy Committee of this Society, having had their attention drawn to the matter, passed on January 31st, 1899, a Resolution "That the present custom of sending milk in unsealed churns is unsatisfactory, inasmuch as it exposes the farmer to the risk of having his milk tampered with during transit." Communications were opened with the railway companies, and an assurance was received that at a meeting held at the Railway Clearing House, on May 10th, 1899, all the companies had agreed that they would not refuse to accept milk churns "sealed," provided the conditions under which the companies accept such cans were adhered to. These conditions are thus defined in a letter addressed on October 12th, 1899, by the Railway Companies Association to the Assistant Secretary of the Railway Department of the Board of Trade:—

> "Senders have for a long time been allowed to send milk in sealed cans; the companies accept the declaration of the senders as to the quantity conveyed, no extra charge being made; the only condition the companies require to be fulfilled is that the tare weight of the cans shall be stamped upon the outside of the can, so that in case of doubt the quantity of milk within the churn can be approximately ascertained by allowing 10¼ lb. for each gallon of milk declared. It does not appear to the companies that there is any difficulty in the senders protecting themselves against alleged loss of milk in transit by sealing, padlocking, or otherwise fastening their cans."

5. With regard to the investigation suggested by Mr. Shand to whether "milk which was pure when it left the farm did not get contaminated while in transit by rail" (*i.e.*, presumably that milk which has been ascertained before it leaves the farm to be perfectly free from the bacilli of tuberculosis, should be tested for bacilli on its arrival at a railway station in a milk churn, and again on its arrival at its place of destination) the Committee invite attention to the following paragraph in the leaflet on "Tuberculosis in Dairy Stock," issued by the Society in March, 1899:—

> "In a small proportion of cases tubercle bacilli may be detected in milk by microscopic examination, and such milk is always highly dangerous. It ought to be clearly understood, however, that failure to detect the bacilli by microscopic examination of milk is not reliable evidence that such milk is free from the germs of tuberculosis."

There are no means, short of inoculation or feeding animals, of deciding that milk is absolutely free from tubercle bacilli, and, as above stated, the failure to detect the organisms by the aid of a microscope does not prove that they are not present.

6. Whilst, therefore, fully alive to the importance of tuberculosis in its relations to dairy stock (a matter on which their veterinary advisers have for some time been

engaged in experiments and inquiries), the Committee cannot, for the reasons above stated, see their way to undertake the particular investigation suggested to them.

With regard to the outbreaks of contagious disease amongst animals, Professor M'Fadyean had submitted to the Committee the following report :—

Anthrax.—During the forty-three weeks of this year for which the returns have been published, 446 outbreaks, with 760 animals attacked, have been reported. The figures for the corresponding period of last year were 442 and 855 respectively.

Glanders.—The returns with regard to this disease are very discouraging, the outbreaks already reported during the current year being 200 in excess of the number reported at the same date last year. The total number of outbreaks in 1899 was 682, whereas 944 outbreaks have already been reported this year.

Rabies.—This disease has unfortunately reappeared in South Wales, which was the last district to be relieved from the Muzzling Order at the beginning of the year. Five cases in dogs and two in other animals have already been reported, and the Board of Agriculture has reimposed Muzzling Orders over an extensive area in the counties of Brecon, Carmarthenshire, and Glamorganshire.

Swine Fever.—The returns at this date show a decline of over 200 outbreaks, as compared with the same period of last year, the numbers being 1,659 and 2,064 respectively.

Foot-and-Mouth Disease.—Since this disease was detected in Suffolk at the end of January last, 317 outbreaks have been reported and confirmed by the Board of Agriculture, and, according to the Gazette Returns, the number of animals actually attacked in these outbreaks has been 227, viz., 175 cattle, 50 sheep, and 2 pigs. The number of animals slaughtered on account of exposure to risk of infection has not been published. The sequence of the outbreaks has been as follows :—The first occurred in Suffolk on the borders of Norfolk at the end of January. The next occurred in Norfolk in February, and in the same month the disease appeared in Bedfordshire. After an interval of a month it reappeared in Norfolk, on the marshes, and in May it was detected in Hertfordshire. No fresh outbreaks were reported in June and July, but in August the disease was discovered at places as far apart as the East Riding of Yorkshire and Flintshire in North Wales. In September an outbreak was detected on a farm in Wiltshire, and subsequently it spread to two neighbouring farms. The last outbreak occurred in Staffordshire, near Lichfield. That was on October 5th, and there is therefore some reason to hope that the country is again free from the disease.

Research Laboratory.—The number of morbid specimens forwarded to the Research Laboratory at the Royal Veterinary College during the third quarter of the year was fifty-three. During the same period outbreaks of abortion, ringworm, and ophthalmia (in cattle) have been investigated, and the experiments regarding horse-sickness have been continued.

Foot-and-Mouth Disease.

Earl SPENCER said no one who knew anything about the diseases of animal, or was interested in the subject, but would have viewed with great satisfaction the enormous progress which had in the past been made in stamping out foot-and-mouth disease. But in this life we were subject to disappointments, and he confessed that it had been a great and bitter disappointment to him to learn of the recurrence in many parts of the country of this disease, which was a source of loss and injury to farmers and stock-owners. They had present amongst them that day Sir George Brown, who had had unrivalled experience in that matter, and he (Lord Spencer) would like to ask whether it had been possible to trace the origin of the outbreak. So far he had been unable to gather any information as to the origin of this disease in various parts of the country. The first outbreak was perhaps more easily accounted for, as it occurred near the sea coast ; but as to the outbreak in Yorkshire, Wales, and other parts of the country, he was at a loss to know what was the cause of them. He supposed that few of them would assert that foot-and-mouth disease sprang up spontaneously, though they might trace a certain similarity between one outbreak and another. A great variety of outbreaks had now arisen in different parts of the country, which had apparently no connection whatever with each other, and he should like some authoritative opinion on this matter. He sincerely trusted that with a firm administration of the law which had been passed with respect to this disease, they would be able in the future to maintain that immunity from contagious disease which it had been their good fortune to maintain in the past under the various Governments which had been in office. The matter was one of great importance to the agricultural world, and especially to the owners of animals in this country.

Sir NIGEL KINGSCOTE said he was so impressed with the singular fact that these outbreaks should have occurred in different parts of the country, far removed from one another, that he ventured, as Chairman of the Governors of the Royal Veterinary College, to seek an interview with Mr. Long, the President of the Board of Agriculture, on the subject. His object in doing this was not in the least to try and weaken the system adopted by the Board of Agriculture in stamping-out this disease ; but owing to the difficulty of tracing its origin, or of not tracing it at all, he had heard doubts expressed in several quarters as to whether it was really foot-and-mouth disease. In the case of an outbreak on a farm where the owner had pedigree stock, he suggested for consideration whether it would not be possible for strict isolation to be adopted, until it was proved by inoculation and diagnosis that the animals were actually suffering from foot-and-mouth disease.

Sir GEORGE BROWN said it would be absurd for him to attempt to deny that the whole course of the outbreak had been erratic in the extreme. The sudden appearance of the malady at places remote from any known centre was entirely contrary to anything which they had hitherto known of the history of the disease. It was true that in former times, in certain cases, great difficulty had been experienced in tracing the origin of an outbreak, and often no connection with a known centre of infection could be discovered ; but in the present instance nearly all of the seventeen outbreaks had been surrounded in mystery. Notwithstanding this fact, however, the whole of the evidence critically examined left no escape from the conclusion that this was the genuine disease, seeing that clinically it had presented itself exactly as it had always done since it first appeared in this country in 1839. It was a curious fact that those who had had most experience in this malady, viz., some of the inspectors at the ports for foreign animals (men who had had extensive opportunities of seeing the disease in all its forms during half a century of its prevalence) had expressed themselves quite as much surprised as the owners of the animals at discovering that the disease was foot-and-mouth, and, indeed, were sure that it could not possibly be anything else. Although he was no longer actively engaged in these investigations, he still took the greatest possible interest in them, and he had been told that the most careful and strict inquiry had been made in every instance. He could not, however, help expressing regret that more publicity had not been given to the facts which had been ascertained, because they tended to prove that the common impression among owners of stock

that the affection was unlike foot-and-mouth disease, as it did not spread even in the herds in which it had broken out, was erroneous. In several cases which had come under his notice the infection had extended rapidly. He was not certain of the absolute correctness of the figures, but to the best of his recollection in one herd of fifty animals, two or three of which were discovered to be affected, it was found that before slaughter could be completed twenty-seven of the cattle were suffering, and other similar cases had also been recorded. In reference to Sir Nigel Kingscote's suggestion that inoculation or isolation should be employed to test the infectivity of the disease, he could understand that it would not be favourably received by the Board. It would naturally be urged that the work of a sanitary department was to stop the disease, and not to find out whether it would spread if they gave it the opportunity. There could not be any doubt that the measures which had been adopted had been very complete, for it was not unreasonable to state that in no case had the infection spread beyond the centres of origin, owing to the circumstance that the animals were at once shut up, and killed as quickly as possible. With reference to the apprehension which was felt as to the serious losses which would arise if the disease broke out in a pedigree herd, he could not speak with any authority, but he might venture to say from his experienee in the past that in such cases some plan would be devised to prevent the slaughter of a number of valuable cattle. It had been proved that the disease in this country, though it had caused an enormous amount of injury, was not fatal like cattle plague or pleuro-pneumonia. Taking all the facts as they stood, he should have felt quite unable, even if he had been asked, to advise the Board of Agriculture to do otherwise than they had done. He admitted that the whole thing was a puzzle, but although the disease had taken an unusual course he had no doubt himself that it was foot-and-mouth disease, and that the Board of Agriture, by acting as they had done at every centre of infection, were taking the best means to get the disease out of the country as quickly as possible.—*Live Stock Journal.*

THE TRAINING OF BODY AND MIND FOR THE PROFESSION OF MEDICINE.

Extract from an address delivered by Sir JOHN WILLIAMS, Bart., M.D.

TRAINING OF THE SENSES.

The training of a lad for the profession of medicine cannot be begun too early, and particular attention should be paid in his case to that part of education which should in a greater or less degree be the possession of every youth whatever his position in life when he leaves school—the training of his senses. All boys should be trained to use their eyes, their ears, and their hands—for it may be said of many, "They have eyes but they see not, and ears they have but they hear not"—and to acquire manual dexterity. Every lad should be taught early to use his eyes, to see and recognise the various objects, living and dead, which nature so bountifully supplies in earth, air, and water. To a medical man this training is of special importance, for the faculty of observing is one of his chief aids. Without it he is helpless, he is not fit to visit or to treat the sick. The cultivation of this sense cannot be begun too early. I will illustrate its value, not from a professional visit to the sick room, but from an entirely different phase of life.

A party were once upon a coursing expedition, but their wanderings in search of the hare had proved fruitless. Like incompetent craftsmen who blame their tools, they blamed the land and the farmer, for they had come tothe conclusion that there was no game on the land and that the farmer was a poacher. Disappointed and despairing of sport they were on the point of giving up the search when a man approached who was known to one of their number as an accomplished poacher. He said to the new-comer, "*Dafydd, swllt am scwarnog.*" "*Yn Wr?*" queried Dafydd. "*Cewch yn wir,*" was the reply. Satisfied as to the ability and willingness of the would-be sportsmen to pay the shilling, Dafydd walked quietly around, and in a few minutes the cheery cry of "See-ho" fell on delighted ears. The hare was coursed and caught, thanks to the dogs and cultured Dafydd. "*Swllt am un arall,*" and in a short time the same pleasant cry was heard again. This illustrates well enough the difference between the trained and the untrained physician when visiting the sick room. The sportsmen with the untrained eyes had walked over the land the whole day and had seen nothing, while the poacher, whose delight in the daytime and on shining nights had been the study of puss and her habits, whose eyes had been trained from boyhood to discover her on her form and to watch her on her quiet or hurried rambles or gambolling with her mate in the light of the queen of night, readily and surely discovered her hiding-place. The experienced and cultured physician, in like manner, when he visits the sick room sees at a glance those visible signs which reveal the past and lift the veil which hides the future, while the untrained man sees nothing and learns nothing; to him the past remains a blank and the future hidden.

Again, every child should be taught to use his ears and his hands. Singing is in some degree taught in most schools; drawing, with some amount of handicraft, might also be taught with great advantage. Children are taught to play on the violin, harp, or piano from early years. A small fiddle is obtained for the little fingers which cannot stretch over the stops of the finger-board of the full sized instrument. It is only by beginning his training at an early age that one becomes an accomplished performer on one of these instruments. A touch, a stretch, a strength of finger, and a certainty are thus acquired which cannot be gained in later life. The ear also is trained to distinguish and appreciate sounds in their tone, pitch, volume, and character. By training the hands a manual dexterity with a delicate sense of touch capable of appreciating slight vibrations and slight differences of resistance and elasticity are acquired, all of which are of the greatest value to the practitioner in the diagnosis and treatment of disease. A trained hand can often by palpating the chest alone discover the seat and sometimes the nature of disease, while its use in the diagnosis of disease in other cavities is constantly called into requisition. A trained ear, again, is of no less importance in the detection and appreciation of the various sounds which are produced in the different organs of the body both in health and disease, and it renders possible a diagnosis of the nature, seat, and extent of diseases which would not be possible without its aid. Training of the eyes and hands is as essential to a medical man as it is to an artist, and training of the ears and hands is as necessary to him as it is to a violinist or a pianist. The education in elementary schools should be a training and not a cramming, such as it is apt to become when estimated by so-called results. It should be a training calculated to help a lad to live a better, a happier, and a more intelligent life in whatever station he be placed. It should be the same for all. No difference should be made between the education of the son of the labourer, or the son of the farmer, of the parson, or of the medical man.

CLASSICAL EDUCATION AS A PREPARATION FOR PROFESSIONAL TRAINING.

To the delightful pursuits I have mentioned must be added, when the lad has passed to a higher school, others of a different character. Books will then be his

chief, although perhaps not his only, study. It becomes a question whether in these schools a difference should be made in the education of youths destined for different callings in life—whether that of one should be on ancient lines and that of another on modern lines, that of one classical and that of another scientific, or that of one literary and that of another commercial. It is still held by some that the best preparation for all professions is a classical education, but the more general opinion is that a difference should be made and that other subjects should be taught in addition to Greek and Latin. In many of our schools there is an ancient side and a modern side, and boys destined for certain pursuits are placed in the former while others who intend to follow other vocations are placed in the latter. For all, however, for whatever calling they are destined, a certain general training is given. The subject, however, which is of interest and of importance to you is what is best, or at least the best attainable, general training, the best attainable culture, for a boy who prepares for the study of medicine. The answer to this, made long ago and partially acted upon to this day, is a classical training. This answer, however, should be reconsidered in the altered state of medical knowledge.

In the higher schools a great part of a lad's time is devoted to learning the Greek and Latin languages and to making acquaintance with their literature. Greek was for centuries the language of Christianity and philosophy and it was also the language of theology and science. At a later period the discovery was made that the dogmas of theology could be rendered in Latin, and therefore Latin became the language of the Church and of science. It continued to be such until comparatively recent times. In these two languages, after the revival of learning in Western Europe, was enshrined practically all learning. Greek and Latin became known as the learned languages, and a knowledge of these languages was necessary as an introduction to the learning and "scholarship" of the time. This educational *régime* ruled up to a period not long past, and all boys who received a higher education, whatever their pursuit in life, had to learn the learned languages. I have not a word to say against classical scholarship, but there is much to be said upon the question whether a boy preparing for the medical profession should devote several years to acquire a knowledge of the two languages. The training for the three professions of theology, law, and medicine is in many respects much alike. There is a special training for each, but before this is entered upon a course of general training has to be passed to fit every candidate for admission to either of the three for the pursuit of his special studies. For the three professions this general training is, and always has been, much the same. Take the clerical profession. The preparatory training is chiefly, if not entirely, a study of Greek and Latin and their literature. This study is pursued in the higher schools and afterwards in the university. When the University course is finished the aspiring cleric in the best arranged scheme enters a school of divinity to study his special department of learning for two years before he obtains a licence to practise his profession. In the case of the clergyman, the whole course of his education from the time he enters a higher school is a preparation, a special preparation—as special a preparation for the study of his special subject as the study of science is for the special study of medicine. In the case of the law the preparatory studies are the same as those for theology, a knowledge of Latin being essential to a learned lawyer.

Greek and Latin Useless for Doctors.

What is the value of a knowledge of Greek and Latin to a professor of the art of medicine? I will tell you in the words of a distinguished writer and scholar who has recently passed away: "As to doctors, can we gravely admit that they ought to understand the language in which their prescriptions are written, and that they find it instructive to read Galen and Hippocrates in Greek? To men of science it is pointed out that their ever-increasing technical terminology is systematically formed from Greek and Latin words. That is true; and it is also true that a man of science might obtain a perfect grasp of this terminology by means of a list of words that he would learn in a day and the use of a dictionary that he might acquire in a week." Although useless to a medical man in his profession, however, yet it may be necessary to know Greek and Latin in order to understand English, to develop the mental faculties, and to gain general culture—then, indeed, it is worth even the medical man's while to devote the time to learn these two languages. I will let the same writer reply again: "The fact is that the study of Latin (for Greek, except in respect of scientific terminology, has much less to do with the question, and would hardly have been placed on a par with Latin here but for the hasty and random way in which the stock arguments on the question are continually repeated) cannot tell us what the English language is; it can only help us to understand how it has come to be what it is. In order to learn to speak English with accuracy and precision we have one rule to follow—to pay strict attention to usage." But it is said, "If we do not teach a boy Latin or Greek we cut him off from the highest literary enjoyment, and we prevent him from developing his taste by studying the best models. It would avail little to call in question (had I space and inclination to do so) the surpassing excellence of ancient literature. For my purpose I must regard this point as decided by an over-whelming majority of persons of culture. But it will not be denied that in the English, French, and German languages there is a sufficiency of good literature to fill the leisure of a person engaged in any active calling, a sufficiency of work calculated to give a high kind of enjoyment, and to cultivate very adequately the literary taste. And if such a person were ever visited by a painful hankering after the time-honoured volumes that were sealed to him, he might console himself by taking note how often his contemporaries who had enjoyed a complete classical education were in the habit of taking down these masterpieces from their shelves. For I cannot help thinking that classical literature, in spite of its enormous prestige, has very little attraction for the mass of even cultivated persons at the present day. I wish statistics could be obtained of the amount of Greek and Latin read in any year except for professional purposes, even by those who have gone through a complete classical curriculum. From the information that I have been able privately to obtain I incline to think that such statistics, when compared with the fervent admiration with which we all speak of the classics upon every opportunity, would be rather startling." The fact seems to be that, with comparatively rare exceptions—and those are not in the professions—a classical education is pursued, not for the culture which it gives, but in order to acquire the instruments for special pursuits in after-life, such as theology, law, philology, history, archæology, the profession of teaching, etc. Those who prepare for such pursuits specialise from the first, for they devote themselves from the beginning of their education to gain command of the instruments with which they work in after life, while those devoted to science are made to learn that which is of little or no use to them in their after pursuits. For the latter, and to a lad destined for the medical profession, matters at present are still worse; for what command does he acquire over the Greek and Latin languages? Greek is not now compulsory, while the knowledge of Latin demanded of the medical student is so small that it does not enable him to read the easiest Latin book except with difficulty and with the aid of a dictionary. The time—a part of six or seven years—

devoted to gain such an accomplishment appears to be wasted.

French and German Essential.

What, then, should a boy destined for medicine learn before he begins his special studies at the age of 17 to 18 years? I should say that in addition to those subjects which are generally taught in schools he should have a thorough course of the English language and literature. This will do more to train his intellectual faculties and to give him a command of language, a vocabulary, a taste for good literature, and a culture far larger and better than he can obtain by acquiring an elementary knowledge of Latin which will be of no use to him, is too scrappy to be a source of intellectual enjoyment, and which will in a short time be forgotten. French and German should also be learned, and I believe the power of reading both languages with ease could be acquired in the time now devoted to learning Greek and Latin. A knowledge of these two modern languages is essential to a practitioner who is desirous of being among the leaders of his profession, for the work done in the laboratories and hospitals of France and of Germany is of such a high order that no one who is ignorant of it can be considered abreast of medical knowledge.—*The British Medical Journal.*

HORSE BREEDING IN IRELAND.

The question of the Irish horse supply is so important that we make no apology for referring to the scheme which, it was stated, the new Agricultural Department will shortly place before the County Councils in Ireland.

The scheme, which is said to have been practically adopted from the old scheme of the Royal Dublin Society, is understood to provide for the registration of approved stallions, service nominations being given to selected mares, and premiums and prizes being distributed to mares and young stock, through the agency of local shows.

One step, however, has been taken by the majority of the Committee of which more is likely to be heard, and that is, that the owners of thoroughbred and agricultural stallions only are to participate in the advantages of the scheme.

In considering this question we cannot do better than quote two paragraphs from the minority report of the Lord-Lieutenant's Horse-Breeding Commission which appear to us particularly apposite:—

"2. That in the application of this grant the needs of each class of breeder should be recognised. By giving, say, to the hunter breeder a thoroughbred or approved hunter sire, to the cart-horse breeder a suitable agricultural stallion, or to the breeder of harness horses a Hackney."

"3. That in the selection of the particular breed of stallion or stallions for each locality the wishes of the breeders of horses in the locality should be consulted."

At the time we urged that these two paragraphs contained the only true method of dealing with the matter in a wide and generous spirit, and this becomes the more necessary when part of the funds are to be raised locally. To our horse-breeding friends in Ireland, who, as far as our experience goes, appear to understand their own business uncommonly well, we would say. Insist on there being no such unreasonable restrictions, but claim your right to breed whatever will pay you best, if you are to find the money. The men who are interested in Irish hunters we would ask, How can you sit by and see such animals subsidised as clean-legged cart horses without taking steps to have a stud book of your own, when you need not fear the introduction of any alien blood, and the horse you care for will be amply protected?

Many is the good horse now bred by the half-bred hunter sire, the use of which often pays the breeder far better than putting his mare to a weedy thoroughbred, and many a time of late years has the farmer of the North or West of Ireland got a good price for a stepping horse by a Hackney stallion, though few of the best stallions of that breed have as yet been placed within his reach.

Any scheme to be successful should be one to bring about the introduction of the best stallion of its kind, that each locality considers most suited to its requirements, and unless it is conceived in a wider and more generous spirit, it will bring ridicule on its authors and those who have to administer its provisions.

We are aware that in the last few years nearly all the prize-winners in the harness classes at the Dublin and Belfast shows have either been Hackneys or the produce of Hackney stallions, and that many of these animals have been purchased afterwards at high figures for the English market, and we have always held that Ireland might do a great deal more than it does at present in providing harness horses for London, where people must have horses that can step, for which they are prepared to give a good price. Now many of the best and handsomest carriage horses in London come from abroad, though it is a striking fact that at the recent International Horse Show at Paris a Hackney stallion won the championship in a severe competition against all comers.

The real arbiters in the case are the local authorities in the Irish counties, and we cannot help thinking that when they once have the facts put before them they will arrive at the practical conclusion that that system of horse-breeding which pays the best and gives fair play to every man should alone be encouraged.—*Live Stock Journal.*

CHAMBERS OF AGRICULTURE.

A meeting of the Council of the Central and Associated Chambers of Agriculture was held on Tuesday, Nov. 6th, at the rooms of the Society of Arts, Adelphi. Mr. Victor Cavendish, M.P., presided, and amongst those present were Mr. A. F. Jeffreys, M.P., Mr. Grant Lawson, M.P., Mr. E. Strachey, M.P., Captain W. H. Wilson-Todd, M.P., Colonel Victor Milward, M.P., and Mr. Laurence Hardy, M.P.

Before beginning the ordinary business of the meeting the Chairman expressed the deep regret of the Council at the death of Mr. S. Rowlandson.

Mr. E. H. Godfrey, secretary, reported that Mr. Rouse Orlebar and himself had visited the Paris International Agricultural Congress as official delegates from the Central Chamber of Agriculture. The Chairman moved "That letters be addressed to the President and Secretary of the Paris International Agricultural Congress, the Société Nationale d'Agriculteurs, and other representatives of French agriculture, thanking them in the name of the Council for the cordial reception of the delegates of the Central Chamber of Agriculture on the occasion of their visit to Paris last July."

The motion was seconded by Mr. T. M. Francis and adopted.

It was agreed, on the motion of Mr. Grant Lawson, Vice-Chairman, that the Central Chamber should again co-operate with the Farmers' Club in holding a joint dinner on the Tuesday in Smithfield week, December 11th.

Mr. B. St. John Ackers moved the adoption of the Cattle Diseases Committee's report, which, after expressing regret that renewed outbreaks of foot-and-mouth disease had occurred in various parts of the country since the last meeting of the Council on May 29, stated that in the first week of August the disease appeared in the

East Riding of Yorkshire. Later in the same month, outbreaks occurred in Flintshire. During September three outbreaks were reported in Wiltshire. On October 7th the disease was detected in Staffordshire, and the report of the outbreak was immediately followed by the scheduling of a district situated in the counties of Stafford, Derby, Leicester, and Warwick. There had thus been eight additional outbreaks of the disease since the committee last met on May 28. According to the official returns of the Board of Agriculture there had been altogether 17 outbreaks in eight different counties since the re-introduction of the disease into this country last January, the total number of animals attacked being 227. The returns issued did not give the number slaughtered of animals which had been in contact with the diseased animals. The counties in which the outbreaks occurred were Norfolk, Suffolk, Bedford, Hertford, York (E.R.), Flint, Wilts, and Stafford. With the exception of the original outbreak in Norfolk, where the animals affected were isolated, each outbreak, immediately after being confirmed by the veterinary officers of the Board of Agriculture, was dealt with by the prompt slaughter not only of the diseased animals, but also of those which had been exposed to infection. The orders of the Board of Agriculture scheduling districts around the areas of the outbreaks in the counties of York (E.R.), Flint, and Wilts had now all been revoked, and the only district still remaining scheduled was that in Staffordshire and the adjoining counties. The committee regretted that the efforts of the Board of Agriculture to trace the origin of the outbreaks had not been successful in any case. They were glad, however, to note that the Board of Agriculture were steadily pursuing the system of stamping out the disease by immediate slaughter of the animals affected and those in contact with them. At the present time there were good grounds for hoping that the country might soon be again regarded as entirely free from the disease. With regard to swine fever, the committee were glad to find that the number of outbreaks during the present year, up to the end of last week, showed a decided decrease, compared with the corresponding period of 1899. The committee considered that all pigs found to be affected with swine fever, and those in contact with them, should be immediately slaughtered, and compensation paid under the powers conferred by the Diseases of Animals Act of 1894. In reference to sheep scab, the committee stated that the number of fresh outbreaks reported to the end of September last was 1,308, compared with 1,378 to the end of September, 1899. They strongly recommended that the Board of Agriculture should obtain the necessary legislative powers to order the compulsory dipping of sheep, in order to prevent and eradicate this disease. Mr. St. John Ackers, in recommending his resolution, said it was satisfactory to know that England was again free from foot-and-mouth disease. The last outbreak in Staffordshire had subsided, and he had the order revoking the restriction before him. He deprecated the tendency of the Board of Agriculture to substitute isolation for slaughter and immediate compensation to owners. He thought the department should be supported in its efforts to stamp out rabies.

Mr. C. Middleton seconded the motion.

Mr. Bowen-Jones moved an amendment recommending that local authorities should have power to provide and pay for public dipping tanks. He thought that the work of dipping could be best superintended by the local authorities.

Mr. Snodgrass and others opposed the principle of compulsory dipping.

Mr. A. F. Jeffreys pointed out the difficulty of moving sheep over long distances to fixed dipping tanks.

Prof. J. Long supported Mr. Bowen-Jones's amendment, which, however, was ultimately withdrawn.

Mr. E. Strachey expressed a hope that the Council would pass a strong resolution that the President of the Board of Agriculture be asked "to insist upon immediate slaughter and compensation in all cases" of swine fever.

An addition to the report incorporating this suggestion was made, and the report was adopted.—*The Times.*

GOVERNMENT VETERINARY SURGEONS.

To the Editor "*Independent and Nation.*"

Sir,—Through the medium of your valuable paper I should like to draw Mr. H. Plunkett's attention to the unfairness of allowing the Government veterinary surgeons who are stationed in different parts of Ireland engaging in private practice, and thereby entering into competition with the veterinary surgeons who are obliged to live on the incomes from practice alone.

Owing to the depreciation in animal value, and the increased numbers of members in the profession, the country V.S. finds it difficult enough to make ends meet without having as a competitor a Government official.

The Government should pay their veterinary surgeons salaries that will enable them to live without private practice, and, further, make them independent of the public.

The matter requires to be remedied in the interest of present and future practitioners—presumably the graduates of the Royal Veterinary College of Ireland,—Yours truly,

Country V.S.

DRUGGING HORSES ON THE TURF.

To the controversy which Lord Durham's speech at Newmarket has brought into being Mr. Leopold de Rothschild makes a very interesting contribution in the form of a letter to *The Times*. The letter contains the following extract from one which he has just received from one of the most influential members of the American Jockey Club :—

"I see by this morning's paper that the Earl of Durham has begun an attack in the Jockey Club against the Americans, and I presume the discussion will turn largely upon the question of what is called "doping." It is a matter which is troubling us a great deal here. It formerly was practiced on what we call the "outlawed tracks," which have now been almost entirely broken up—that is, courses which had no licences and were condemned by the Jockey Club. It has now, I am sorry to say, crept into our racing here, and we have for a long time made futile efforts to detect. At a meeting which lasted till midnight last night we discussed this subject quite extensively and determined to go at it in a scientific way.

It is very difficult to detect the effects of these drugs, although one suspicious indication in many horses is when they break out at the post. This drugging of horses has been made a special study by disreputable veterinarians, and is not well understood by the average reputable practitioner.

At one time the drug was given hypodermically, and it could be detected, if the horse was carefully examined, by the wound and swelling caused by the hypodermic syringe, and that was one of the reasons why they were afraid to use it on well-regulated courses, but now I understand it is administered in capsules, given in a gelatine of varying thickness according to the required time when the "dope" is desired to take effect, the coating being absorbed, on the principle of a fuse, in a calculated time.

Our proofs have been so inconclusive that our method has been to find some other excuses for ridding our-

selves of suspected owners. Recently, for an offence which was not of a character to warrant a very severe punishment, we have, nevertheless—because of our suspicions—rid ourselves of a certain owner by refusing his entries. Drugging is not practised as generally as some people are inclined to claim. Many horses are antagonistic to the effects, and therefore it cannot always be used. Our Jockey Club has a stringent rule against the use of any stimulants. You can well understand, however, that opportunities offer themselves for administering them without detection which must necessarily escape us. We have an excellent detective force, and I may fairly say that it is very much the exception here, and I have also come to the conclusion that it is not generally used to any degree on your side

The rule against "doping" is as follows: "Any person who shall be proved to have affected the speed of a horse by the use of drugs internally, whether administered by hypodermic or any other method, or who shall have used appliances, electrical or mechanical, other than the ordinary whip and spur. Every person so offending shall be ruled off."

You will observe in the above rule a regulation against electrical or mechanical appliances.

At the outlawed racecourses here they used electrical devices in the saddle and what was called an "electric spur," but that has been entirely stopped at the reputable courses, and is not difficult to detect.

AN ADDRESS ON THE PHYSIOLOGY AND PATHOLOGY OF INHERITANCE, OR WHAT DO WE INHERIT FROM OUR PARENTS?

A Lecture Introductory to a Course of Clinical Medicine delivered in the Newcastle-upon-Tyne Royal Infirmary, on Oct. 31st, 1900.

By Thomas Oliver, M.A. Durh., M.D. Glasg., F.R.C.P., Lond.,

Physician to the Newcastle-upon-Tyne Royal Infirmary and Professor of Physiology at the College of Medicine, Newcastle-upon-Tyne.

Gentlemen,—From a biological point of view "we are the heirs of the ages." Not only in the sense that we are participators of the accumulated experience of the race, but in the physicial and mental endowment that belong to each of us, do these words find scope for their realisation. Studying together, as we shall this winter, clinical medicine, it has seemed to me that the present is not an inopportune time to draw your attention to some of the less frequently discussed problems that underlie human life in health and disease. If I can show you that disease is not a morbid entity, requiring to be diagnosed and treated, but something more, and that into our conception of disease there must enter, in addition to the symptoms complained of and the physical signs of ill-health, knowledge of the individual with his peculiarities of constitution, his susceptibilities, his age and his occupation—in a word, that it is not disease as disease, but the individual with his malady that requires treatment—the time at our disposal will not have been misspent.

Disease, from the words "dis" and "ease," simply means want of ease. In health all our organs functionate without impressing themselves upon our consciousness, but in disease we are often too painfully aware of their existence. It was the opinion of the ancients that disease depended upon a chemical change in the humours of the body, and so for a period the humoral pathology prevailed, remnants of which are still seen in the nomenclature of disease. Later disease was thought to be due to a distinct and tangible cause, a *materies morbi*, while subsequently to this it was regarded as the last link in a chain of processes of deranged metabolism and abnormal function with diminished resistance to external surroundings. Within the last two decades, owing to the great strides made by bacteriology—a science which has shown that many diseases, especially those of an infectious nature, and even others that are not appreciably infectious, are due to the entrance into the system of microbes—medical opinion as to the cause of disease had veered round to a belief in the existence of a *materies morbi*. Even here there is danger in being too exclusive. Admitting that tuberculous disease, for example, is bacillary and that there is no tubercle without Koch's bacillus, and also that pneumonia and erysipelas are equally caused by micro-organisms, it is for us to consider whether other factors are not in operation and to assign to each its respective rôle.

Leaving out of consideration congenital affections and deformities, or those abnormal conditions with which a child is born attributable to circumstances operating directly upon the fœtus in utero, as in congenital syphilis, I shall deal with those individuals who are born presumably healthy and yet in whose system there are such refinements of structure and deviation from the normal that as time goes on life is brought prematurely to a close by disease similar to that from which one or both parents perhaps died, or during whose lives there are exhibited traits of character or peculiarities of temper and of disposition that recall the life of the parent or of an earlier ancestor. I eliminate congenital syphilis and congenital tuberculosis, for in these the actual disease is simply passed on to the offspring and assumes in it the same activity as it did in the parent. In the inheritance of which I speak it is not disease, but simply a susceptibility, that is transmitted.

How, then, can I best illustrate the physiology of inheritance? Galton in his book on "Hereditary Genius" speaks of the child as being not simply the product of the two lives paternal and maternal, but also of the four grand-parents and eight great-grandparents and so on, indicating that into the production of the physical constitution and mental qualities of a human being there enters more than is contributed by the immediate parents. The book is an attempt to show from the family history and biography of men distinguished in literature, in science, in legislation, in the profession of arms, and in law that the qualities exhibited by men which made them renowned depended less upon their education and surroundings and more upon the physical constitution and mental powers inherited from their parents or earlier progenitors. In one sense the teaching is depressing. We are what we are because we cannot be otherwise, and we become what we are through inherited qualities. Human experience, on the other hand, shows that however much certain qualities may be inherited it is not always and alone thus that they come to us. Evolved in the course of time, they have been fostered by survival of the fittest, by marriage, and by education. If we add to patience, to zeal, and to capacity for work good health, then by the proper excercise of all our powers advancement in life must be secured. Social advantages, dogged perseverance in a particular calling, good manners, and ability to utilise opportunities make for success; yet, on the other hand, it must be admitted that when an individual is possessed of great natural ability or those qualities of intellect and disposition that urge to the performance of acts that lead to reputation it is almost impossible for him to have his progress thwarted either by the circumstance of lowly birth, by social disadvantages, or even by the defects of early education. By virtue of the gifts which he has inherited he overcomes all difficulties and therefore must come to the front. If there are inherited qualities that make for good, so, too, must there be others that make for harm to the individual, and it is this particular feature of inheritance that forms the theme of

my discourse to-day. When we ask ourselves the question, "What is it that is inherited?" we find it difficult to reply. A mother, for example, may transmit masculine peculiarities to her son which she herself does not exhibit, and it does not follow because a father and mother are highly intellectual that their child will also exhibit ability. The child, as already stated, is the offspring, not of the parents alone, but of earlier ancestors as well. Given intellectual parents, all we can say is that the chances are that their offspring will be gifted to a greater degree than children in whose family nothing beyond mediocrity has ever been attained. Ability clings to families, but in order that it may be displayed there must also be inherited capacity and zeal for work, for without these only a sorry figure will be cut in the world by the individual compared with what might be accomplished. We all know persons of this stamp—men who are extremely able, yet since they lack the other qualities they do not rise in life. The number of people must be few who would underrate the influence of early home training or the invaluable help rendered to a youth by a good and able mother. The natural ability of such a mother, finding but limited scope within the confined sphere of her maternal and domestic duties, causes her to stimulate her son to attempt a career and to achieve results which she herself could only aspire to in imagination; hence it is that able men are often the sons of clever women.

If it is true that mental gifts and physical powers are only obtained by inheritance, is no encouragement to be extended to mediocrity and no hope held out to men whose family records contain no names of sons eminent in science, in art, or in literature? To believe that one is destined to a great end is at once to command success, but there is another fatalism that leads to destruction. The age in which we live is one of keen international competition and the prize must ultimately belong to that nation which, possessing great physical vigour, natural resources, or acquired means of sustenance, finds its opportunity in equable development of mind and body, in adherence to right, in patience, and persistence, and in the avoidance of all causes that lead to degeneracy, physical, mental, or moral. Evolution proceeds apace in nations as in individuals. It is from the lower ranks of life that the higher strata of society are filled. There is a continual moving upwards. New conditions, fresh surroundings, and unexpected difficulties stimulate men to rise, but behind all these facts there lies the plastic material upon the hereditary acquisition of which in its best form so very much depends. In a general way, then, we support the contention of the author of "Hereditary Genius." Galton's conclusions have not been allowed to pass without a challenge. Some writers maintain that mental ability is not the outcome of inheritance but of individual acquisition, that it is the result of the operation of such causes as education and external surroundings. Without throwing myself further into this discussion at present I shall try to find answers to some of the problems I have raised by going altogether outside the sphere of the human family, whose actions, ruled oftener by sentiment than by reason, cannot always be controlled, and see whether in racehorses whose pedigrees can be accurately traced and doings recorded Galton's theory finds support or not.

The Modern Racehorse.

So far as I know there is no instances on record of a horse that was not a thoroughbred ever having won the Derby. This circumstance is appealed to in order to demonstrate the superiority of blood and the transmission of racing qualities by careful mating of sire and dam. A certain amount of doubt surrounds the origin of thoroughbred horses in this country, but to the Darley Arabian which came from Aleppo to Aldby Park in Yorkshire *circa* 1705 to 1710 most authorities attribute the commencement of the breed. Others regard the Byerley Turk as the founder of the famous family, others again claim Godolphin and Flying Childers, but Godolphin came upon the scene 20 years after the Darley Arabian and Flying Childers was his own foal. It is the descendants of the Darley Arabian that form the renowned breed of English racehorses, whose speed for short distances is regarded as the outcome of inherited qualities and the result of careful in-breeding. It is an interesting fact that nearly every winner of the great races last year was a descendant of St. Simon who, although he never competed in the Derby, was yet the better horse, for he beat the Derby winner of his year. St. Simon was from from first to last an unbeaten horse, He did not run in the Derby owing to the fact that his breeder, Prince Batthyany, died while the horse was a yearling and the nomination therefore became void. The last race St. Simon ran in was at High Gosforth Park as a three-year-old, and this race he won easily. Shortly afterwards he retired with his splendid constitution to the stud and became the progenitor of many distinguished horses—thus causing him to be considered one of the best stallions of the century. During his first six years at the stud he begat stock that won no fewer 222 races of the value of £220,343. When St. Simon was a two-year-old he ran five races and won them all, and he repeated this as a three-year-old. The Derby was instituted in 1780 and from that date until now the race has been run every year without a break, while the St. Leger, which was commenced in 1776 has also an unbroken record. The Derby is a one-and-a-half-mile race, the St. Leger one and three-quarter miles, and the Oaks about one and a-half miles. The same weights are practically carried in the three races, horses carrying a few pounds more than the mares. The time the Derby is run in is about 2 minutes 45 seconds, but if the ground is wet it may take as much as three minutes four seconds. Blinkbonnie and Shotover covered the distance in 2 minutes 45 seconds, but Ayrshire, Merry Hampton, and Blair Athol only took 2 minutes 43 seconds. The winner of the Derby for 1900 was Diamond Jubilee, who also won the Two Thousand Guineas and the St. Leger, and who belongs to the Prince of Wales. The Duke of Westminster's Flying Fox won the Derby in 1899, and in 1896 Persimmon, also the property of the Heir Apparent, was the winner. Both Diamond Jubilee and Persimmon are descendants of St. Simon by Galopin, a Derby winner, out of St. Angela. It is an interesting fact that St. Simon and Perdita II. are the sire and dam of the Prince of Wales's three valuable stallions Florizel II., Persimmon, and Diamond Jubilee, who are said to be worth £120,000. Perhaps never in racing annals has the success of a sire ever suspassed that of St. Simon. Other horses compete with him for distinction. Amongst these is The Baron, who 50 years ago was the sire of Stockwell and Rataplan, animals more valuable in the stud than on the course. There is also the Duke of Westminster's Ormonde who was sold to America for £30,000 and who was the sire of Orme, an animal which is less known as a racer than as the begetter of Flying Fox, who was recently sold to France for £35,000. Add to the above facts the following—viz., that Stockwell is the sire of Doncaster, who is the sire of Bend Or, who is the sire of Ormonde, who again is the sire of Orme, by whom was begotten Flying Fox, and we have a line of famous racehorses which, like that of St. Simon, goes direct back to the Darley Arabian, the father of the best blood in the racehorses of to-day. On the maternal side the strain can be traced back to the Godolphin Arab, a sire who has also contributed to the production of the distinguished breed. It is sometimes said of the human family that the children begotten of an elderly father are delicate. Foals of ageing racehorses are considered by breeders, as a rule, not to be good winners, but there are exceptions. Lord Lyon, who won the Derby and St. Leger, was born

in 1863. He was the sire of Minting, who was born in 1883—*i.e.*, when Lord Lyon was 20 years old. His previous foals, however, were of no use as winners, but Minting was an exception.

What is the effect of castration upon horses from a racing point of view? The Derby is open to two-year-old and three-year-old colts, but there is no instance of a gelding having ever won the race. Curzon, who was in addition a half-breed, all but succeeded in becoming the exception to this rule, but he just failed. He ran second in the Derby of 1895. The more natural and the more perfect a horse is the greater is his chance of winning. Entirety, therefore, counts for much even in racing.

We hear a good deal in the affairs of human life of the superiority of sex, and, while there is no doubt that men occupy the higher positions in society and stand out more prominently than women, it may be that greater opportunities and advantages are afforded to the one sex than are afforded to the other. Let us appeal to the experience of the Derby. Girls reach maturity earlier than boys, and for quick perception they are usually far ahead of boys. In the racing world some experts maintain that the best mares are after all the best horses—a statement that is equivalent to saying that mare Derby winners are better than the best horses that have also won the Derby. It is their opinion that racing is carried to greater perfection by mares than horses. Probably a mare at two years old is better than a horse at that age, but it would seem as if mares deteriorate more quickly than horses and compete with them unfavourably as three-year-olds. The Derby is an open race and there mares compete with horses. They have done so, and on some occasions they have won. Blinkbonnie won in 1857, and Shotover in 1882, but previously to Blinkbonnie winning the race no mare had won the Derby since 1801, when to Eleanor, who was also winner of the Oaks, was awarded the palm. It is only right to add that fewer mares have competed and therefore they have run against odds so far as numbers are concerned. Still, the fact remains that during 120 years only three mares have won the Derby. It is fleetness of foot that is wanted, and what do the records show? The mares Blinkbonnie and Shotover ran the Derby in 2 minutes 45 seconds, but the horses Ayrshire, Merry Hampton, and Blair Athol coursed the distance in 2 minutes 43 seconds. It is only natural to suppose that in some respects racehorses are like ourselves. Some days and at certain seasons of the year we are in better physical health and spirits than at others and we do better work. The bulk of high-class racing in England is in the spring and summer when mares are constantly coming into season. They are consequently placed at a disadvantage as regards the Derby, which is run in the month of May. September is the mare's month. It is then that the St. Leger is run. This is a race in which mares and horses compete on equal terms, and what do its records show? Since 1776, the year in which the race was established, mares have only won 23 times out of 124. It would appear, therefore, that both in the Derby and the St. Leger the greatest speed has been obtained by horses and not by mares. In the breeding of racehorses it is absolutely necessary that the greatest care should be taken so as to mate sires of repute with mares that are well bred and distinguished as racers. An opportunity is given to breeders to show off the racing qualities of mares at the Oaks, a race which is only for fillies and which is run two days after the Derby. The winners of this race often become the dams of future winners of the Derby.

I think I have shown you that so far as racehorses are concerned the qualities that make them famous, and upon which a high money value is placed, are inherited. Blood is everything; it is pedigree that commands the price and makes both horses and mares which have been the winners of the principal races so valuable for breeding when they have become old and useless for racing purposes. One illustration of such a mare will suffice, and in this instance I shall take it from our own immediate neighbourhood. Beeswing was born in 1833 and was the property of Mr. Orde, of Nunnykirk, near Morpeth. She began to run when she was two years old and continued to run until she was nine years old. She ran in 64 races and she won 51 times, many of the races being over two miles in length. Beeswing won the Newcastle Cup and became the dam of Newminster, who won the St. Leger. Newminster became the sire of Hermit, who won the Derby, while Hermit was the sire of St. Blaise, who also won the Derby. Hermit was also the sire of Thebais and Lonely, both of whom won the Oaks. After 1842 Beeswing ran no more races. She was simply kept at the stud and she died at the age of 21 years. These facts, taken rather imperfectly from racehorses, show us that it is blood or family inheritance and careful training that alone can win the Derby, and that so far as the superiority of sex is concerned the evidence is in favour of the horse rather than the mare. The English racehorse is the product of very close breeding in and in. In the human family, to too close in-breeding or consanguineous marriages is attributed such mental and physical defects in the offspring as deafmutism, insanity, and other nervous disorders. Wherever there are defects in the parents or in their family the marriage of first cousins is almost certain to be followed by an intensification of these defects in the children. If close in-breeding in the human family is bad, what is the result of this form of breeding carried on for so many years in the English racehorse? There are many who believe that the English racehorse of to-day is degenerating. Certainly the horses are run too young, for by the time they reach four years of age many of them are practically done as racers. Sprint running for man or animals is bad, as the distance is covered at an excessive speed from the commencement to the finish. The mode of racing itself tells upon the frame of the individual animal. Add to this the cumulative effects of close in-breeding and there will be much to explain the greater delicacy of constitution, and diminished resistance to cold, and the loss of staying power observed in the racehorse of to-day. Breeders feel that fresh infusion of blood is necessary and that this can be obtained by the mating of an English sire, say, with a pure-bred dam brought from America or Australia whose predecessors, transported years ago to other soil, show a valuable pedigree which has not deteriorated in the descendants in their far off surroundings.

Atavism.

Professor Ewart in his Penicuik experiments deals with subjects similar to those which we have been discussing, and their application is obvious. There are uncertainties in stock-breeding just as in Galton's distinguished families. Wherever there is life there is variation. Without variation life would be monotonous and there would be no development. Stockbreeders take advantage of variation by perpetuating them so as to improve the breed. In the course of breeding the unexpected often happens; results occur that can only be explained by reversion, prepotency, and in-breeding.

Reversion.—Members of the human family do not always bear a resemblance to their parents. The likeness is sometimes rather ancestral than parental. So far as heredity is concerned the parents, we have seen, contribute a half, the grandparents a quarter, the great-grandparents an eighth, and so on, of the total heritage of the average offspring. Composed as the ovum cells and sperm cells are of innumerable gemmules it would seem as if, during development, there occurred conditions in which protoplasmic elements of an older ancestry than the parental competed with those which were derived from the immediate parents and thus succeeded in impressing upon the individual those characters that cause

the offspring to resemble, not the parents but the grandparents or even the great-grandparents. That, in a word, is an example of atavism. It is sometimes a circumstance of great value. If, for example, sporting dogs are closely inbred for three or four generations the puppies are extremely degenerated and yet in the grossly inbred litter there is perhaps one dog who is strong and has a hardy constitution, due to what is called breeding back. He resembles, in a word, a former ancestor, so that reversion would appear to have infused fresh vigour and to have rejuvenated him owing, presumably, to ancestral units having overcome and controlled the more recently evolved and less stable units which, could they have had their own way, would have given rise to "offspring bearing all the marks of decadence that characterised the immediate ancestors."

Prepotency and in-breeding.—In the breeding of animals it is generally admitted that one of the individuals is more prepotent than the other. It is neither easy to demonstrate the fact, nor, when present, to determine the amount of prepotency. In-breeding encourages prepotency. It is because the Jews are a purer breed and an older race that when they marry with the English they are observed to be the more prepotent. In-breeding carried to excess becomes a doubtful heritage. Attempts to obtain prepotency by close in-breeding are often followed by loss of vitality and fertility. By trying to keep the blood too pure species may deteriorate. In order to maintain the vigour of a race cross-breeding becomes at times a necessity. It restores vitality. The protoplasm of animal cells has apparently assigned to it a measured lease of life, and unless fresh blood is introduced to rejuvenate it the protoplasm can only give rise to a limited number of generations.

Telegony.

In breeding animals for sporting or other purposes the word "infection" is employed to explain the circumstance of a female who had been fertilised for the first time by a male bearing a distinctive colour and form, and who subsequently bears offspring to another male of different colour and form and yet exhibiting a distinct resemblance to the male by which the female was originally impregnated. It is owing to a belief in the occurrence of this possibility that breeders are careful of pedigree dogs and take means to prevent prize bitches being covered by dogs that are not of good breed. These men are afraid of the baser blood showing itself in future generations. It is maintained, although it is difficult to demonstrate the fact, that the same thing occurs within limits in the human female. The example of telegony taken from biology, and which appears in nearly all text-books, is Lord Morton's mare. This mare had been, in the first instance, covered by a quagga, and succeeding foals begotten by other sires showed in a descending scale stripes on the body that recalled the zebra. While Professor Ewart, in his experiments at Penicuik, obtained striping and marking of succeeding foals by different sires as in Lord Morton's mare, he explains the circumstance differently. Ewart regards the striping not so much as evidence of "infection," or "telegony," but of "reversion," for stripes, he maintains, are not unknown in Arabian horses. Belief in harking back, or "infection," is so strongly held by breeders that it must rest on some foundation. Breeders are of the opinion that in impregnation something akin to saturation of the dam's blood and nature takes place through the sire. Is it possible that there can be any absorption from the blood of the fœtus in utero by the mother! We know from experiment that the injection of diphtheritic and protective toxins into the embryos of pregnant rabbits can kill the mother in the one instance and render her immune in the other. Physiological injection is therefore a possibility, but it is difficult to see how germ-cells occupying the depths of the ovary of the female at the date of her first impregnation can have their protoplasm so impressed by the sperm-cells of this sire that when subsequently impregnated by other males the progeny should bear resemblance to the original sire. There is no proof that the blood of the mother or her system can be saturated, and yet such circumstances as the following are known. In breeding Bedlington terriers it is desirable to obtain dogs with as powerful jaws as possible. A Bedlington bitch is therefore first covered by a bull-terrier dog and the mongrel litter is destroyed. Covered subsequently by a Bedlington terrier dog the litter is practically pure with the exception that the puppies have stronger jaws than they otherwise would have had, and they also show much of the gameness of the bull-terrier. Anatomical structure and physiological characters are therefore present in the second litter which do not belong to the breed at all, and they could only have come from the bull-terrier. It is difficult to find examples in the human race, but Dr. Balfour of Surinam noticed among the coloured population that "if a negress had a child by a white man and afterwards fruitful intercourse with a negro, the latter offspring had generally a lighter colour than the parents." Beyond, therefore, drawing your attention to the possibility of telegony, I shall not attempt to explain it.

Heredity of Disease.

By the term "heredity of disease" I do not mean, as in congenital syphilis, transmission of the actual disease from which a parent is suffering, but a susceptibility to disease. Among the hitherto recognised diseases might be mentioned hæmophilia, cancer, phthisis, diabetes, and the alcoholic habit. In hæmophilia there is transmitted to males through the female, who does not herself usually exhibit the disease, a peculiar defect confined probably to the walls of the small blood-vessels whereby on the occurrence of the most trivial wound—e.g., lancing the gums or the extraction of a tooth—fatal hæmorrhage may occur. The hereditary nature of this disease, or the fact that the transmission is through the female, have never been questioned. An extended genealogical tree which appears in a former paper written by myself showed how, after lying dormant in the mother, the disease re-appeared in her sons.

Diabetes is, in many instances, a hereditary disease. Weil, in investigating diabetes insipidus, traced 90 members of a family extending through four generations, 70 of whom were living at the time of the investigation. The disease was traced to a common ancestor, Peter Schwartz, who was born in 1772. His descendants consisted of five children, 29 grandchildren, and 56 great-grandchildren, or a total of 91 persons. Of these persons 21 were certainly diabetic and 13 were doubtfully so. Removing the doubtful cases there remained 78 persons, of whom 23 were affected with diabetes, or 30 per cent. I have at the present time under my care two brothers, aged 40 years and 43 years respectively, suffering from diabetes mellitus. In one of them the glycosuria is intermittent. The father died from diabetes and a paternal uncle is at present dying from the same disease. The maternal grandmother died from diabetes. Within the last four months I have also had under my care a father, aged 45, who is suffering from diabetes, and his daughter, aged 14 years, suffering from the same malady. The Royal Insurance Company have been good enough to send me the details of the family history of an applicant for insurance to their company. The applicant had seven brothers and one sister. The father died from diabetes, aged 65 years. One brother, aged 19 years, died from the effects of an accident. Three brothers, aged 49 years, 41 years, and 32 years respectively, died from diabetes; and one sister died from the same disease at the age of 23 years. The remaining three brothers

are healthy. Facts such as these surely point to diabetes mellitus under certain circumstances being hereditarily transmitted.

When we come to deal with phthisis and cancer, the former of which is a bacillary disease, we admit that it is necessary somewhat to alter our views upon the hereditary character of these diseases. Briefly, all that can be said of pulmonary tuberculosis is that there is the accidental incidence of the tubercle bacillus upon tissues that are susceptible. Experience tells us that some families are more susceptible than others to infectious diseases. Some children take every infectious disease that is going, while others, though equally exposed to infection, escape. It would seem, therefore, as if a certain habit of body was transmitted, due to some peculiarity of the idioplasm of the individual. However excellent a filter the human placenta may be it cannot prevent maternal poisons passing to the fœtus. Tuberculosis itself is so very rarely transmitted directly from parent to child that at this juncture we can ignore it, nor is there any strong evidence that the virus is transmitted and lies dormant for a period. All that is transmitted is the soil—an enfeebled constitution or diminished resistance to the particular microbe. In the close intimacy that exists between an affected mother and her infant there are doubtless opportunities given after birth for infection, but this is infection and not transmission. The soil counts for as much as the micro-organism. Charrin has demonstrated experimentally that if the blood and tissues of the body are chemically altered resistance to pathogenic germs is diminished, while Chatin and Guinard have shown that when an animal is impregnated with excess of sugar it becomes a readier prey to the diphtheritic poison and to the infection of typhoid fever. Excess of fat also diminishes the resistance to diphtheria, whereas animals that have been exposed exclusively to proteid food resist for the longest time the diphtheritic poison. May not the lines of cellular nutrition which are laid down in the fœtus in utero and which are inherited be the explanation of susceptibility to disease?

It is difficult to obtain with accuracy the medical history of any human family, for where there are mental and physical defects there is rather a desire to conceal than to publish the facts. The records of insurance companies however, to some extent remedy this deficiency. Before examining a life for insurance the details of the family history have generally been supplied to the offices. Within the last 50 years the span of human life has distinctly lengthened. In England and Wales during the period from 1841 to 1850 the death-rate in males of all ages was 23·1 per 1000. During the years from 1886 to 1889 the rate was 20 per 1000, while among females the rates were 21·6 and 17·8 per 1000 respectively, showing, therefore, a distinct gain. Opposed to these facts must be placed the number of births. The birth-rate of this country during 1842 equalled 32·6 per 1,000,000 of the population, while in the period from 1886 to 1890 it equalled 31·4—a fall in the birth-rate which, if it continues, may jeopardise the future of England just as at the present time it is the cause of anxiety in France.

Pulmonary phthisis has for long been regarded as hereditary. Where there is a family history of phthisis insurance companies may accept the life, if the applicant is under 30 years of age and physically strong, but they will load it by adding a few years to it, or if several members of the family have died from phthisis they will refuse the life altogether. Experience has taught them that members of a family, some of whom have already succumbed to phthisis, are much more liable to the disease than members of other families which have no such record. Owing to the change which has come over medical opinion in regard to the hereditariness of phthisis, to fuller knowledge of its bacillary character, to improvement of the physical conditions of life, and to the fact that the death-rate from this disease is diminishing, insurance companies are disposed, according to the extent of the taint in the family, to offer less stringent terms than formerly. During the years from 1858 to 1860 the number of people in England and Wales who died from phthisis was on the yearly average 2565 per 1,000,000. During the period from 1871 to 1875 the average number was 2218. Between the years 1886 and 1890 the death-rate from this cause was 1635, in 1891 it was 1599, and in 1892 it stood at only 1468. Within these years there has been a fall in the mortality-rate of phthisis of 42 per cent. The diminution of the death-rate may be consequent upon our better knowledge of the infectious nature of the malady and improvement in the housing of the working classes, or it may possibly be due to reversion, as in the case of in-bred animals, to a healthier stock. Notwithstanding Weismann's theory that acquired characters are not transmitted, and that the germ-plasm alone is transmitted, there is yet implanted in the nucleus of the cell a tendency to variation. Its structure cannot but be influenced by the character of the protoplasm that surrounds it, and hence while Weismann's theory explains much in heredity there are still conditions that are not explained by it. Experience and statistics alone can settle the question of family phthisis. Because the death-rate from phthisis is diminishing that is no proof that the disease is not hereditary. All that this circumstonce shows is that there are fewer cases of acquired as well as of inherited phthisis, and that improved vital resistance on the part of the individual is to some extent overcoming the hereditary influence.

I have dwelt upon the evil effects of "in-breeding" in animals. If these are bad in the case of animals how very much aggravated must they be in the human race when there is a family history of phthisis. On humanitarian grounds alone consumptives should not marry. Marriages, however, are not regulated by reason but by sentiment, and even when circumstances are made clear to one of the contracting parties, an expression of optimism usually prevails before which pathology generally has to bow.

We have seen that not only in the medical profession but in the public mind and in insurance offices there is a belief that pulmonary phthisis is hereditary. Careful sifting of all the facts shows that the extent of the inheritance has been exaggerated.

Without carrying the remainder of this inquiry much further I shall only say a few words on the question of the hereditariness of cancer. The mortality records of the Mutual Life Insurance Company of New York deal with 1882 deaths from cancer. The age period in which the largest number of deaths from cancer occurred is from 55 to 60 years. Statistics, both in England and in America, show that the rate of mortality from pulmonary phthisis is decreasing while the deaths from cancer are notably on the increase. It may be that cases are more carefully diagnosed now than formerly, but apart from this probability, there is a very strong feeling in the medical profession that cancer is more prevalent than it was. In regard to the hereditariness of cancer the statistics of the Scottish Widows Fund show that only in 9·5 per cent. was there a history of malignant disease in the parents. In 11 of the cases the disease was transmitted through the father, in 14 cases through the mother, and in one case a brother was similarly affected. The hereditary transmission of cancer is considered to be not so great as that of phthisis, a fact that must be comforting to many people who have lost near relatives from cancer.

Summing up the subject, as to what is inherited from our parents, I would say that from a physiological point of view there is considerable evidence to show that mental, not less than physical, qualities are transmitted, that pathologically such a disease as hæmophilia is inherited, and that where there is a family history of

phthisis and cancer there is, especially as regards phthisis, a greater liability to the disease than where a family shows no such record. I believe that the influence of inheritance, however, has been exaggerated. Tubercular disease is inherited, but only in the same sense as other diseases that are due to microbes. It is in the form of an enfeebled resistance on the part of the tissues. Pulmonary phthisis seems to exhibit a kind of inheritance that is particularly its own, but on scrutiny this is found to be largely due to the domestic character of the malady which is encouraged by our home life, insanitary dwellings, overcrowding of the poorer working classes, infection, Britain's changeable climate, dusty occupations and ill-assorted marriages.—*The Lancet.*

YORKSHIRE V.M.S.

At a Special Meeting held on Tuesday at Leeds, the President, Mr. F. W. Somers, in the chair, the President and Secretary were deputed to represent the Society at the funeral of the late Principal Williams at Edinburgh, on Thursday, November 14th. A wreath was ordered to be forwarded, and a circular to be sent to members of the Society asking them to attend the funeral.

A. McCarmick, *Hon. Sec.*

Personal.

Simpson—McCall. On the 2nd inst. at 4 Wilton Crescent, Kelvinside, Glasgow, by the Revd. David Watson, St. Oswald's, assisted by the Revd. A. J. Scott, of Bargeddie, Henry George Simpson, M.R.C.V.S. son of the late Sir Henry Simpson, F.R.C.V.S., of Windsor, to Margaret, fourth daughter of Prof. McCall, F.R.C.V.S., Glasgow.

W. Pope, M.R.C.V.S.. has been elected an Alderman for the Borough of Kensington.

ARMY VETERINARY DEPARTMENT.

C.V.S. F. Moor was discharged hospital to duty week ending Nov. 4.

C.V.S. J. Stanley-Clarke, D. G. Moberley, E. E. Clode, S. Hirst, W. P. Hill, W. C. Haring left Cape Town for England in the "Fort Salisbury" on Nov. 6.

C.V.S. Fowler arrived at Southampton in the "Tagus" on Friday, Nov. 9, from S. Africa.

Lieut.-Colonel Rayment, A.V.D., left for England on Nov. 8 in the "Nineveh" invalided home.

C.V.S. E. M. Sykes left for England on Nov. 10 in the "Urmston Grange" due at Royal Albert Docks Dec. 6.

C.V.S. Probyn left Cardiff, Nov. 13 in ss. Monmouth for Fiume to load horses for Cape.

Changes of Station, etc.

C.V.S. Batty goes to Pretoria; C.V.S. Watson to Mafeking.

Mr. Farrell who came from India goes to Pretoria. Oct. 14.

C.V.S. Cowx to Durban; C.V.S. Stewart to Ladysmith; C.V.S. Collings to Mooi River. Oct. 15.

V.-Lt. Cochrane rejoined at Volksrust. Oct. 17.

V.-Maj. Day discharged from Hospital. Oct. 18.

C.V.S. Neale, N. Z. M. R., posted to Base Veterinary Hospital, Maitland. Oct. 20.

CORRESPONDENCE

THE APPEAL CASE AT BRIGHTON.

Sir,

Will you kindly, through the medium of *The Record*, convey the welcome intelligence to those of the profession who so kindly came forward in the Callow appeal fund that the conviction in February last has now been quashed, the court also allowed him the costs of the appeal, but were not able to allow the costs of the police court proceedings.

I am hoping shortly to obtain a copy of the report of the case, which, if unable to publish in full, you may be able, possibly, to find space for some extracts from it.

Faithfully yours,

Gerald W. Bloxsome,

Goldsmid Road,
Hove.

"HORSE CONSPIRACY CASE."

Sir,

I am extremely sorry that I am prevented from replying in detail to your correspondent "M.R.C.V.S." as I am advised that as the case he refers to is still *sub judice* I am not at liberty to do so. I may say, sir, that newspaper reports do not usually *exactly* report *all* one says, and it is somewhat remarkable that I sent to your publishers another newspaper report of the same case, which more clearly stated the evidence, but I got no acknowledgment and found another report published. This fact, together with the anonymous letter signed "M.R.C.V.S." in the next issue makes one feel that it may be a disadvantage not to have the honour of acquaintance with the worthy Editor of *The Veterinary Record*.

For the edification of your correspondent "M.R.C.V.S." I may say that if he will send me his card I will gladly give him abundant evidence of cases in which *inexperienced* people are constantly being deceived *re* horses "wind," finding it apparently "all right one day and decidedly wrong the next" both in cases of "broken wind" and "roarers"—much more frequently of course in the former than the latter, but nevertheless in both. Only quite recently a remarkable instance occurred to us. A client sold a bad "roarer" and a few days afterwards the purchasers actually had the impudence to bring the animal to our place and offer it for sale, it was so successfully *improved* in its "wind"!!

Again, I can introduce "M.R.C.V.S." to a F.R.C.V.S. who, at the request of a wealthy client, has supplied *a drug* which it is supposed is the same as that used by certain persons for the purpose of "stilling" or modifying" *roaring*, and the said client testifies to the satisfactory results upon his hunter (a "roarer.")

I must not say any more at present. If "M.R.C.V.S." requires I shall be pleased to write again after the case he referred to is settled. In the meantime, sir, I think I am only upholding the dignity of your valuable journal and the honour due to those letters M.R.C.V.S. when I strongly protest against the latter being used as a sort of "kopje" for one man to hide behind whilst he "snipes" at another who is compelled to be in the open. Let this guileless one come forth and write a description of what he understands by "setting" a horse's "wind" and then he may find there is not much difference between "setting" and "stilling," and if he desires it I shall be pleased to add any information that may help to remove his professed ignorance on the subject.—I am, sir, yours faithfully,

Edward G. Johnson.

[We received two newspapers. When the second arrived the printers had the first in hand, and this is the simple reason for the appearance of the report published.—Ed.]

ASSISTANTS' SALARIES.

Sir,

"Old Obadiah" evidently imagines himself a competent authority in the value of veterinary assistants, and expresses his opinions with a force worthy of a parliamentary candidate. However, taking for granted that his letter is a genuine expression of his opinion, and that he has no intention of playing off a Gilbertian joke at the expense of the poor maligned assistant, I should, in a few words, like to take up the gauntlet he has thrown down, on their behalf, although as I am personally satisfied with my present position I cannot quite feel the same pangs which are ever present in the breasts of those who are, unfortunately, otherwise situated.

Old Obadiah asserts, with dogmatic assertiveness, that all the complaints arise from "disappointed assistants"—so far I grant him the correctness of this part of the sentence—but continues, "who have not been taken at their own estimation of their proper worth." Partly this is correct, but it is undoubtedly untrue to class all cases under this heading, and any individual with a particle of common-sense is aware of other causes of disappointment which in this short letter would be out of place to mention; suffice for the moment we may mention the fact that letters concocted by individuals of the Old Obadiah type, are in many cases the incentive for *satisfied assistants* to enter the controversy and fight for their more unfortunate brothers. Therefore, his contention *re* the disappointed ones falls.

"Most of us" he says "have kept assistants"—I use the word with emphasis—and have been glad to dispense with them. Does he really mean that out of all the assistants that have in the past been employed not one proved worthy of his hire.

It reminds me of a certain practitioner who was reputed to have had twenty-five qualified assistants in nine years, all of whom left behind—in the employer's mind—a character of incompetence and inability to perform the duties required of a veterinary surgeon's assistant. Now, if Obadiah's opinion is similar to and formed upon the same basis as that of the practitioner above mentioned, we must arrive at one of two conclusions. Either the veterinary colleges and practitioners who have pupils, combined, are responsible for nothing but failures, without a single redeeming feature; or Obadiah and similarly constructed individuals are of a peculiarly dissatisfied and egotistical disposition. I leave readers to form their own conclusions, but it is positively certain that *all* veterinary assistants cannot be bad.

I cannot see the point Old Obadiah aims at when he speaks of getting a university graduate to tidy his study and look after his papers. Nevertheless, as a business arrangement, it would be another of his bad "specs" as I feel no doubt the gentleman mentioned might have a cheaper and better substitute in the shape of a thirteen-year-old boy at a still further reduction of salary. Perhaps Obadiah will explain the point he wishes to be driven home? From what I know of employers who favour unqualified assistants it seems patent to me that the object underlying their choice is that, firstly, their own knowledge and ability will not bear the investigation of a scientifically trained assistant's mind; secondly, they (the assistants) stand more humbugging—a great desideratum with many employers; and thirdly, they can cook the clients to the employer's satisfaction and directions without dissension. Yet we still hear the clamour for recognition by our sister profession whilst tolerating the system which obtained in the days of our forefathers—in fact it is nothing but the encouragement of "quackery"—for which not only the employer himself sometimes suffers, but others.

No doubt it would be a source of great satisfaction to our friend to see a qualified assistant rubbing up the brass door plate and scrubbing the front door step, but no individual with a mite of professional dignity would expect such an act of an assistant.

Finally, failures in the profession must be admitted as in every other sphere of life, but to stigmatise all members as failures is as uncharitable as it is unjust. Yet as all, or most, have been asistants "Old Obadiah" has noted them down, and until the time arrives when they shall see eye to eye with their critical old friend, they must remain unworthy, incompetent, worthless, and unjustifiable holders of the certificate granted by the Royal College of Veterinary Surgeons.

WILLIAM BROWN, M.R.C.V.S.

Worksop.

Sir,

I am an assistant of some experience and I believe that utility is a man's only excuse for existence. Nevertheless I should be sorry for the veterinary profession if all employers (who ought also to be professional men and gentlemen) looked at matters in "Old Obadiah's" light.

This is an age of materialism and commercialism. Apparently if "Old Obadiah's" views are correct even the position between a principal and his assistant is to be imbued with the spirit of the age. Where ignorance is bliss it is said to be folly to be wise, but I would suggest that even Old Obadiah's views are only the result of experience gathered in his own practice and with himself as the unchanging employer. If O. O. has found that "directly he keeps an assistant all his expenditure goes up, but with no adequate increase of revenue" then he is worldly wise to dispense with his assistant. I think that even Carlyle's aphorism, *anent* the 30,000,000 mostly fools, must apply especially to veterinary surgeons if the preceding statement is generally true. I cannot agree with the statement. Veterinary surgeons as a rule are not short of common sense, and many of those who employ assistants value and appreciate them even if the expenditure increases and the income decreases, a fact which I do not believe.

I have had ten principals, and so may claim a pretty varied experience. The majority of these principals knew the secret of success as a master, viz., how to employ the "suaviter in modo" with the "fortiter in re." Some of them, and these the minority existed on their contracts and knew little about gentlemen and manners.

The principal who wants his assistant to be a stopgap, a dispenser, or a man to treat yard cases is not unknown in the veterinary ranks. I have met him and don't like him. I pity the young man who takes office under him. The science and art of veterinary medicine and surgery under such a principal soon develope into the science and routine of the art of bunkum.

The duties of the assistant will chiefly consist of the treatment of foot cases and sore backs, or of balling and drenching. His Godgiven intellect will become dulled, stunted, and dwarfed. He will probably finally die both intellectually and morally, if not actually.

The principal who always rises every other morning in a bad temper and whose matutinal expletives form a discordant symphony to the ring of the hammers on his anvils is also a person whom assistants might have on their list as "not likely to be missed." The man who wants you to accept your salary in unequal proportions is also a gentleman to be avoided.

The "living in" game, too, destroys the privacy of home life of the principal, and the assistant can hardly be expected to enter with gusto into the disputes between Monsieur et Madame, or to be always doting on the heavenly qualities of little Alphonse. Unless there is an affinity of feeling and a compatibility of tempera-

ment between the two professional gentlemen this "living in" is uncomfortable for both, and by no means mutually beneficial.

The employer who obtains an assistant for "the same reason that he would buy another horse or a bike," and for that reason only, would certainly be better without a qualified assistant. If his clients don't soon learn the difference between an automaton and a man with brains they must be a very gullible lot.

His neighbourhood must be truly a simple and beautiful professional Arcadia where money must be much more plentiful than wit. Such clients will probably say of the unqualified assistant "That he killed his patient is plain enough. But still he acted quite according to rule. A horse dead is a horse dead, and there is an end of the matter. But if Mr. So-and-So employs a qualified assistant and rules are to be broken there is no saying what consequences may follow."

The salary of an assistant ought to be a question of the principal's means, and the amount of work and responsibility the assistant has. As an assistant I have almost invariably been treated with consideration by my employers, and with respect by their clients. Worth makes the good employer as well as the good assistant, and the want of it the fellow.

The type of mankind represented by the East End Jewish tailor is not unfortunately limited to the East End of London, and the employers of unqualified assistants are as frequently "sweaters" and hoodwinkers as not.—Yours truly,

TONY LUMPKIN.

"NO CASE."

Sir,

Mr. Gray having emerged from the convenient shades of anonymity, now wishes apparently to be received as an apostle of light, whose sole purpose is the search for truth, a desire which I perceive you very naturally share. But if Mr. Gray or anyone else had really wished to know the facts and not merely to fasten on me a charge for which there is no foundation, the truth was ready to his hand in my book, which he at least has never challenged, or on personal application to me, and even if he determined on an attack there was available the straightforward and eminently British way of standing out in clear daylight and fairly exchanging shot for shot.

In a private letter written to *The Harmsworth Magazine*, without thought of after publication, I used the words "my operating table." I did not italicise the word "my" as Mr. Gray has twice falsely indicated. The tactics of persons like Mr. Gray, or for all I know Mr. Gray himself, in making an anonymous charge to the Registration Committee caused me to publish that letter. I did not intend to leave my anonymous assailant free to continue privately the campaign he had not dared openly to initiate. But the use to which this gentleman put these words will show the kind of foundation there is for his charges generally. I spoke of "my operating table." I also speak of "my hat," "my watch," and "my horse." Does anyone fancy that thereby I lay claim to the invention of hats or watches or even of horses? I scarcely think so. But Mr. Gray evidently does. I should not speak of "my hat," but of "the hat that I have in my establishment, the inventors of which are Messrs. Lincoln, Bennett and Co., hat manufacturers, carrying on business in Piccadilly, London." I may be verbose, but my verbosity does not carry me so far as that—life is too short.

Moreover Mr. Gray thinks that "in justice to the rightful inventor" I should again write to *The Harmsworth Magazine* pointing out Monsieur Vinsot's claims. In point of fact I have done a great deal more, for I have disowned the whole article. But Mr. Gray exhibits such solicitude to convict me of some kind of offence that I fear even this drastic measure will fail to secure for me his high approval. Considering that I have Monsieur Vinsot's entire concurrence however in the course I have adopted I derive some consolation from the possibility that I may perhaps continue to exist without Mr. Gray's approval.

Mr. W. Roger Clarke writes a temperate and I believe well-intentioned letter urging on me to state who is the "real inventor of the new operating table." I wish I could, but as there are at least two claimants in the field and I feel no divine mission to act as a judge and a divider between them I shall not attempt to do anything of the kind. All I know for certain, however, is that in 1896 Monsieur Neuf, an engineer, of 73 Rue Dareau, Paris, offered me for sale a working model of a table on the central axis principle; that next year Monsieur Vinsot produced a full sized table, that my connection with the affair has been confined to criticisms, suggestions, and modifications of detail which do not amount to invention, and that I have never claimed to be the inventor.

Taking it for granted, however, that Monsieur Vinsot *is* the inventor it seems tolerably clear that he has rather more right to resent any ill-doing on my part than even those highly disinterested persons who, under the pretence of protecting his claims, are so intent on proving me a disgraceful plagiarist. From first to last he has been informed of everything I have done, and here is his comment on the cause of all the present discussion:

[*Translation*].

Dear Mr Dollar,

Your magnificent publication has charmed me, and I have the intention of producing a similar one for France and for the Exhibition in which I shall deal with the operating room, the table, and with aseptic operations. Could you lend me your magnificent illustrations, for I have not sufficient time to make any for the Exhibition? As soon as the pages are printed I will return them. Pray accept, dear Mr. Dollar, my kindest regards and my very cordial compliments.

E. VINSOT.

That is scarcely the letter of an injured man writing to one who has deprived him of just credit. And if Mr. Gray or anyone else would like to follow up his charge and question my veracity the originals of this and many other letters are at his disposal. Only I don't intend to fight any more ghosts. Let the charge be made by a known man and proved, or an apology tendered.

The blocks asked for above were only sent, used, and returned to me with a letter of thanks. Monsieur Vinsot's own book is now provided with *my* illustrations. So much for the importance to be attached to illustrations. If Frenchmen behaved like a few, I hope a very few Englishmen, Monsieur Vinsot might be accused tomorrow of having pirated *my* invention because forsooth "In the photo of the new operating table Mr. Dollar alone appears."

I hope Monsieur Vinsot's testimony as above given may satisfy these disinterested friends. I have no hope it will shame them. But it may at least demonstrate that *Monsieur Vinsot* is satisfied and that being the case I do not feel called on to further notice *their* delectable effusions.—Yours faithfully,

JNO. A. W. DOLLAR.

56, New Bond Street, London, W.
November 12th.

COMMUNICATIONS, BOOKS, AND PAPERS RECEIVED—Lt. Col. J. A. Nunn, Messrs. C. Baxter, E. L. Stroud, P. Vincent, Jno. A. W. Dollar, W. Brown, G. W. Bloxsome, E. G. Johnson, E. Wallis Hoare. "Constant," "Tomy Lumpkin," "Lucifer."

The Edinburgh Evening News, *The Irish Daily Independent*, *The Evening Dispatch* (Edin.)